

# With the largest single rare earths processing plant in the world, Lynas stock price has risen 224% in the past year

With the recent doubling of NdPr prices, global leading rare earths miner Lynas Rare Earths Limited (ASX: LYC ("Lynas")) stock price has risen 224% (3.4x) over the past year. The question for investors right now is, can Lynas keep moving higher from here.

And the answer?

Well, that depends on your view of NdPr prices going forward and on Lynas' expansion plans.

## Lynas Rare Earths Limited 1 year stock price



Source

## **NdPr demand & supply and pricing forecast**

A March 2021 Adamas Intelligence report forecast:

- **“Annual NdPr oxide shortages of 16,000 tonnes expected by 2030:** Constrained by a lack of new primary and secondary supply sources from 2022 onward, Adamas Intelligence forecasts that global shortages of neodymium, praseodymium and didymium oxide (or oxide equivalent) will collectively rise to 16,000 tonnes in 2030, an amount equal to roughly three-times Lynas Corporation’s annual output, or three-times MP Materials’ annual output, of neodymium and praseodymium oxide (or oxide equivalents).
- **“Market for magnet rare earth oxides to increase five-fold by 2030:** With total magnet rare earth oxide demand forecasted to increase at a CAGR of 9.7% and prices projected to increase at CAGR of 5.6% to 9.9% over the same period, Adamas Intelligence forecasts that the value of global magnet rare earth oxide consumption will rise five-fold by 2030, from US \$2.98 billion this year to US \$15.65 billion at the end of the decade.”

A five-fold demand increase this decade with constrained supply suggests we will most probably see strong long term prices for magnet rare earth oxides (includes NdPr oxide). Given the massive startup CapEx and environmental issues with rare earths mining that should also prove to be a strong barrier for entry for new start-ups.

## **Lynas’ current operation and an update on their expansion plans**

Lynas currently extracts their rare earth ores from their Mt Weld Mine in Western Australia, does initial processing at the Mt Weld concentration plant, then sends the concentrate to Malaysia for final processing into high quality rare earth

materials. Lynas' rare earths deposit in Mt Weld is acknowledged as one of the highest grade rare earths mines in the world. The Malaysia rare earths processing plant is the world's largest single rare earths processing plant.

**Lynas Rare Earths Limited has a strong track record of producing rare earths with a falling cost of production**

## Lynas is a proven & profitable producer



- Unique Tier 1, high grade, long life (25+ year) resource at Mt Weld<sup>1</sup>
- Rich in both LRE & HRE elements
- Provides guaranteed feedstock for separation facilities



- Environmentally-responsible Rare Earths producer
- Mine to magnet traceability
- Life Cycle Assessment with selected partners
- Certified to ISO 14001 (Env Mgmt Systems)



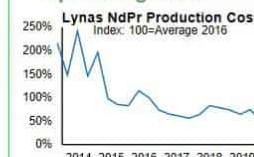
- 8 years' experience as a reliable supplier of quality Rare Earth products
- Hard won inhouse IP, not easily replicated
- Development of processing expertise which is unique to each deposit



- Trusted Customer Relationships
- Quality products and reliable supply has delivered share growth in all key customer markets
- Market leader in Japan



- Strong cost position relative to other suppliers
- Track Record of optimizing costs



Source: Lynas Rare Earths corporate presentation

## Lynas' 2025 projects

Lynas has a 2025 plan to grow their processing capabilities. This includes two key parts:

- A planned rare earths processing facility in Kalgoorlie, Western Australia.
- A commercial light rare earths separation plant in the U.S. This may also include processing of heavy rare earths and specialty materials.

The proposed Kalgoorlie facility has commenced site preliminary works and is fully funded and progressing to schedule. It is targeted to begin operations by July 2023. You can read more details [here](#).

The proposed U.S light rare earths separation plant has recently achieved a signed agreement with the U.S. Government with initial contracts for financial support signed with U.S. DoD. Lynas stated:

“This project is scheduled to be completed in accordance with the Department of Defense timetable and as part of our Lynas 2025 plan. Detailed costings are still being finalized; we expect Department of Defense funding to be capped at approximately US\$30 million. Lynas will also be expected to contribute approximately US\$30 million under the agreement. The plant is expected to be located in Texas. Once operational, the plant is expected to produce approximately 5,000 tonnes per annum of Rare Earths products, including approximately 1,250 tonnes per annum of NdPr. The plant will be able to receive material directly from the cracking & leaching plant that Lynas is developing in Kalgoorlie, Western Australia.”

By 2025 Lynas plans to have a production capacity of at least 10,500 tonnes pa of NdPr (last quarter production was 1,359 tonnes) and their Kalgoorlie facility to be able to feed to downstream operations in the U.S. and Malaysia.

**Lynas’ current and planned global rare earths operations**

# Lynas is the only scale producer of separated Rare Earths outside China



Source: Lynas Rare Earths corporate presentation

After a loss in 2020, Lynas is forecast to have a net income of A\$137 million in 2021, A\$266 million in 2022, and A\$349 million in 2023. This equates to Lynas having forecast PE ratios of 37 in 2021, to 21 in 2022, and 15 in 2023. This compares favorably with MP Materials as I discussed recently here.

As of March 31, 2021, Lynas had a closing cash balance of A\$568.5 million.

## Closing remarks

Lynas Rare Earths Limited has had a great past year helped by strongly rising rare earths prices. Looking ahead Lynas has the 2025 growth plan that has the potential to raise Lynas to the next level. Lynas looks to be in great shape and is well worth consideration for investors that are bullish on the outlook for rare earths, notably NdPr.

*Disclosure: The author is long Lynas Rare Earths Limited (ASX: LYC) and MP Materials (NYSE: MP).*

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# **Surging demand for magnetic materials (NdPr) catalyst for stellar Q1 2021 results for MP Materials**

December 2020 and March 2021 were the two highest months ever for electric car sales. In March 2021, global electric car sales were up 173% YoY reaching 8.2% market share. Europe sales rose 169% YoY reaching 16% share, China sales rose 244% YoY reaching 11% share.

Given EV sales are forecast to reach 30-50% this decade it looks like the Neodymium (Nd) and Praseodymium (Pr) or “NdPr”, “magnetic materials” demand is only going to increase from here. It is forecast that EVs consume ~5% of annual NdPr production today, but may consume ~100% of current annual production by 2035.

**Neodymium (Nd) & Praseodymium (Pr) prices surged higher the past 6 months**

## Neodymium Oxide (Nd) ask price chart



## Praseodymium Oxide (Pr) ask price chart



Source: Kitco

The top two western NdPr producers are MP Materials Corp. (NYSE: MP) and Lynas Rare Earths Limited (ASX: LYC). Today I take a look at MP Materials who state that they are the largest producer of rare earth materials in the Western Hemisphere.

MP Materials was listed in 2020 as a result of the SPAC merger with Fortress Value Acquisition Corp. (FVAC) at US10.00 a share. The merger completed on November 18, 2020. The timing for investors was exquisite with NdPr prices beginning their ~100% price rise from early November 2020.



MP Materials owns and operates the open pit Mountain Pass Mine in California USA, the only integrated rare earth mining and processing site in North America. This gives MP Materials a very high strategic value to the United States. Mountain Pass plans to have an output of 5,000 metric tons pa of NdPr, starting in 2022.

MP Materials state: “Mountain Pass is a world-class asset, consisting of fully integrated and co-located mining and processing capabilities. The self-contained nature of our operations – with mining, milling, separations, and finishing all on one site – affords us significant cost advantages and mitigates operational risks. The Mountain Pass mine contains more than 800k tons of recoverable rare earth oxides with an average 8% ore grade, one of the highest quality known deposits in the world.”

## MP Materials Mountain Pass mine and processing plants in California USA



Source: MP Materials website

With Stage 1 of the mine completed MP Materials now produces approximately 15% of the global supply of rare earths,



currently in the form of an intermediate product—rare earth concentrate—that requires further processing in Asia. Following completion of the second stage of recommissioning, expected by 2022, MP Materials will relaunch its onsite processing facilities thereby resulting in the USA having a self-sufficient U.S. rare earth industry.

MP Materials has recently completed design improvements that de-risk Stage II. The design improvements are expected to improve recoveries, provide flexibility and enhance the environmental footprint.

The results of a March 2021 announcement of a private institutional offering of \$600 million principal amount of MP Materials 0.25% Green Convertible Senior Notes due 2026 has not yet been updated to the market. In any case, MP Materials has sufficient cash to complete their Stage II project.

### **MP Materials achieved a record Q4 2020 on the back of rising NdPr prices**

As we saw in Q4, 2020, Q1 2021 should also bring stellar results on the back of high NdPr prices during the Q1 quarter. MP Materials is due to announce Q1, 2021 results tomorrow, May 6, 2021, after the close. The consensus earning per share is US\$0.09. In MP Materials March 18 2021 presentation the Company stated: “Current REO (rare earth oxides) pricing environment implies strong YoY and QoQ profitability growth in Q1.”

### **MP Materials turnaround is forecast to continue in 2022 and 2023**

From a net loss in 2020, MP Materials is forecast to have a net income of \$68 million in 2021, \$101 million in 2022, and \$238 million in 2023. Now that’s an impressive net income ramp! This equates to MP materials forecast PE ratios of 83 in 2021, to 56 in 2022, and 23 in 2023.

Finally, in April 2021 it was announced that Morgan Stanley adjusted their MP Materials' Price Target to \$41 from \$57, keeping their overweight rating.

### **Closing remarks**

Demand for key magnet rare earths (NdPr) looks set to soar the next decade boosted especially from demand from electric motors used in EVs, some wind turbines, drones, consumer electronics, defense systems and many other high-growth, advanced technologies.

MP Materials' Mountain Pass Mine is already a prized US mine and one of U.S strategic importance. Forecast net income growth assumes they can execute their Stage II plans successfully and become a fully integrated US rare earth end products (especially NdPr) producer in 2022, without any reliance on Asia. Perhaps MP Materials is priced for perfection or perhaps they are priced for their strategic importance. Only time will tell. Feel free to add your comments in the section below.

*Disclosure: The author is long MP Materials (NYSE: MP) and Lynas Rare Earths Limited (ASX: LYC).*

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## **The 600 pound gorilla in the room – welcome, Lynas Rare Earths**

In the rare earths space, it is the 600 pound gorilla, but we mean that in a positive way. Investors familiar with rare earths will know this, but for those of you just coming to

learn about the company, it is one of only two producers of scale of separated rare earths outside of China and is the second largest in the world.

Welcome to the “new Lynas” Corporation, officially renamed “Lynas Rare Earths Limited” (ASX: LYC) on December 1, 2020. Listed on the Australian Securities Exchange, the company has a market capitalization of approximately AU\$3.3 billion. The company’s share price hit an all-time high on December 4, 2020 as the market pays close attention to this industry leading company. Lynas ADRs can also be found on the US OTC, trading under the symbol LYSDY.

What a difference a year (or three) makes. It was just 2017 when the company consolidated its shares on a 1:10 basis, after five challenging years in the rare earths market when the company was on the verge of going bust. Recall that the global rare earths’ price bubble collapsed in 2014 on the back of a negative World Trade Organization decision against China. A global industry had all but been decimated and lowest cost production and industry dominance was now Chinese.

Except for Lynas. The company mines rare earths in Western Australia at Mt. Weld, which is one of the world’s highest grade rare earths mines. The mined ore is concentrated at the Mt. Weld concentration plant and sent for further processing to Lynas Malaysia’s Advanced Material Plant near Kuantan, Malaysia where the facility, commissioned in early 2013, produces separated rare earth oxide products for sale to customers in Japan, Europe, China and North America. Currently, the most valuable product produced at the plant is praseodymium/neodymium (NdPr), used in magnets.

With the increasing interest in all things electric and electronic, rare earths have again come to the fore. Specifically, because so many things need electric motors (more than 140 small electric motors in the average automobile – electric and hybrid electric vehicles use even more small

electric motors and larger traction motors), global demand is increasing.

We have known about this for a long time and the world is only now (again) starting to pay attention. Because of previous global price increases and the subsequent price collapse in the rare earths, China arguably has the world's most complete rare earth industry chain. This means in order to make full use of the rare earths mined in various countries, miners must come to China for processing. China produces approximately 80% of the world's rare earths but can only supply about 30% of the raw ore.

This is a problem, because the digital transformation is unstoppable – there could be as many as eight rare earths metals in your smartphone and who can't wait to get the next latest and greatest device? However, companies using rare earths for our end-use products are becoming focussed on supply chain resilience and suppliers who are closer to home (also a strategic decision). This was also recognized by US President Trump, who signed an executive order at the end of September 2020 declaring a national emergency in mining in an effort to jump (re)start the domestic industry.

Ahead of the curve, management of Lynas had already recognized this and despite being a global leader in rare earths, in 2019 put into action "Lynas 2025" – a plan to grow production and create a new rare earths processing centre in Western Australia. In addition, also in 2019, the company announced a Memorandum of Understanding to develop a rare earths processing facility in the United States. To be located in Texas, Lynas and the company's partner announced in April 2020 that they will receive "Phase 1" funding from the U.S. Department of Defense (DoD) for planning work for the construction of the facility. Initial plans are to process ore at the facility from the company's mine at Mt. Weld and it was announced that in July, 2020 the companies signed a contract with the US DoD for detailed design of a heavy rare earths

processing facility.

As goes the rare earths industry, so goes Lynas and in August 2020, the company successfully raised AUS\$425 million in new equity to fund future and ongoing activities in Australia and Malaysia, giving the company an even stronger balance sheet to finance future growth plans and maintain an industry leading position in the rare earths space. At year-end June 30, 2020, the company had positive working capital of approximately AUS\$84 million plus a loan of AUS\$164.9 million.

The world absolutely needs more rare earths to supply a seemingly unquenchable demand for new and evolving products. The rare earths supply chain has been dominated by China, but refreshed interest in strategic and domestic supply has caused the world to re-evaluate the current rare earths supply system. Despite a number of new and promising startup rare earths companies, Lynas continues to be the global leader. Does it belong in your portfolio?

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## **Jack Lifton talks with Neo Performance's Constantine Karayannopoulos on China's rare earths recovery**

The Technology Metals Show host Jack Lifton talks with Constantine Karayannopoulos, President, CEO & Director of Neo Performance Materials Inc. (TSX: NEO) about the recovery of the Chinese rare earths industry. "The Chinese rare earths industry is recovering but so is the rare earths industry everywhere," Constantine said in an interview. "It looks like



the worst is over in China and the rest of the world is showing spurts of demand in specific markets, even in automotive.”

Jack and Constantine went on to discuss neodymium and praseodymium (NdPr) prices, the separated praseodymium market, and how the current market situation is affecting the prices for neodymium and praseodymium. In the interview Constantine also provided an update on Neo’s magnetic materials business.

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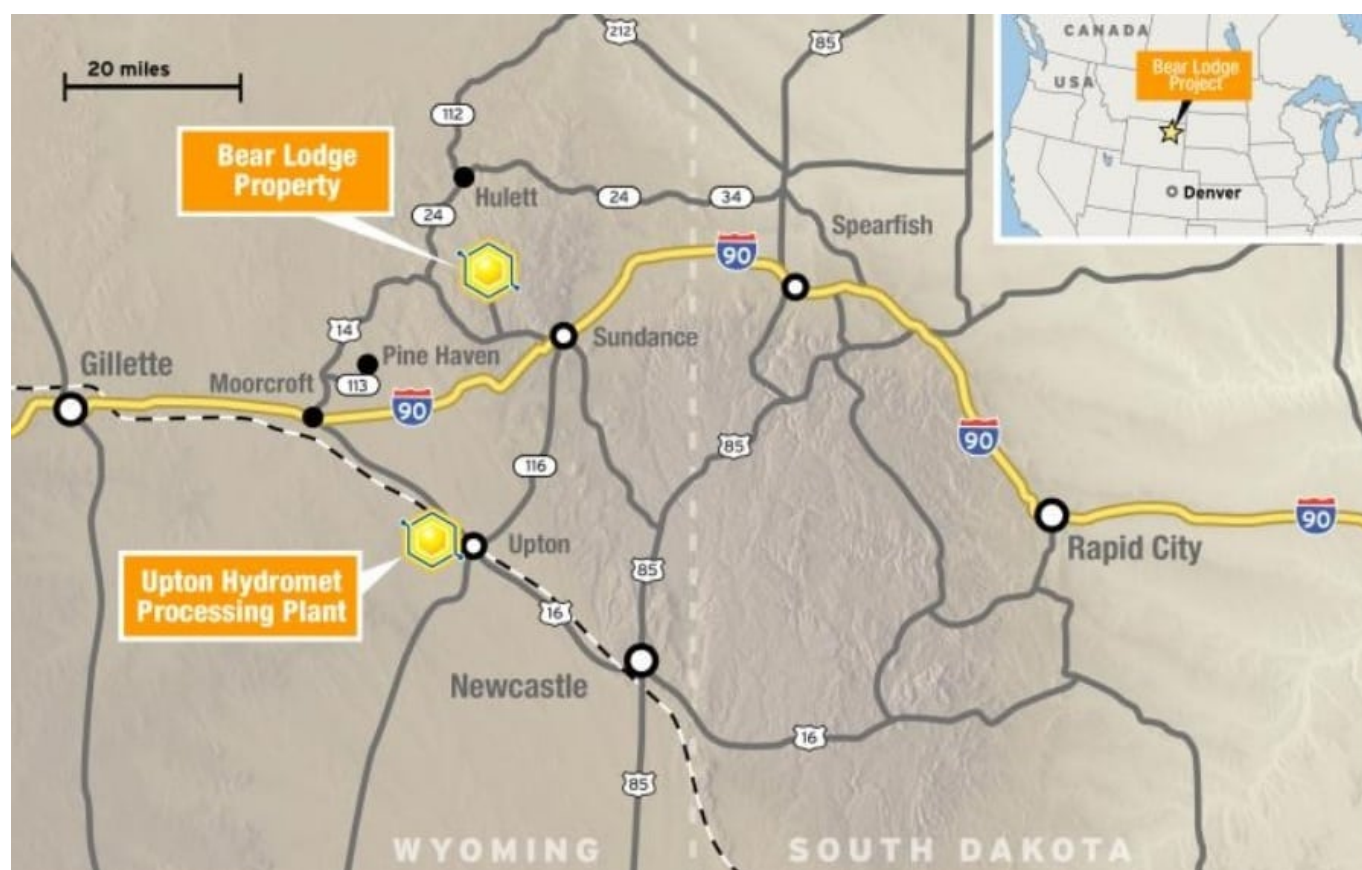
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## **A highly attractive ‘US based’ rare earths project awaiting funding**

As discussed previously the ORE Act introduced by Senator Ted Cruz is the first step in recognizing the need for a domestic supply chain for critical materials, including rare earth elements (REE). Additionally the US Defense Department recently stated that it will seek \$1.7 billion for rare earths purchases in the 2021 National Defense Authorization Act.

One of very few companies that has a quality US based rare earths deposit is Rare Element Resources Ltd. (OTCQB: REEMF). Their flagship project is the Bear Lodge Critical Rare Earth Project in northeastern Wyoming, USA. The Project has a projected 45-year mine life with an initial 9-year high-grade zone.

### **Bear Lodge – A world class resource in a top tier mining district in Wyoming, USA – Location map**



In 2011, the US Geological Survey determined that the Bear Lodge Project contains one of the largest disseminated rare earth deposits in North America. Extensive geological work by the Company since 2004, including drilling, geophysical and geochemical sampling and assaying, has resulted in a Measured & Indicated Resource of **18 million tons grading at 3.05%** Total Rare Earth Oxide (TREO) at a 1.5% cutoff grade. This includes 3.0 million tons of Measured and 15 million tons of Indicated resource. Total contained M&I Resource is estimated at **over 450,000 metric tonnes of TREO**. It is worth noting that the

cutoff grade is the starting point for some projects.

The site has easy access and within a short trucking distance there is an industrial park with a railway, utilities and large unused land. This is an advantage unlike a number of potential opportunities in the space which are located in remote locations with challenging logistics. The one challenge is that the deposit is in the Black Hills National Forest but with the current administration and the desire to establish a domestic source this should not be an impediment to permitting. As indicated on their website "the US Forest Service is preparing the Environmental Impact Statement (EIS) on the site, the draft of which was completed in January 2016 and is now suspended. The Company completed its applications for two key permits/licenses with a goal of receiving them at the same time as the final record of decision, the decision document for the EIS, which is currently on hold until markets support resumption of the process."

The project's most valuable end-products are Neodymium and Praseodymium (Nd/Pr) oxide which would account for over 80% of total potential revenues. It has some Terbium and Dysprosium (Tb/Dy) (approx. 0.5%) which with Nd/Pr would produce 95% of the project's potential revenues.

In February, 2020, President and CEO of Rare Element Resources, Randall J. Scott, stated:

"We are very encouraged by the pilot plant results using our proprietary technology to produce a thorium-free Nd/Pr oxide. This product is key to unlocking the supply chain for rare earth magnet production in the U.S. Our ability to produce this product is timely given the current interest and associated funding initiatives of U.S. governmental agencies. The Company recognizes the critical nature of the products produced from the Bear Lodge pilot plant and we will continue to work closely with those who can enhance our trajectory to full production."

The October 2014 PFS resulted in a post-tax NPV10% of US\$330 million and a post-tax IRR of 29%. Even better was that the upfront CapEx came in at a very low US\$290 million with only a 2.9 year payback period. All very impressive numbers for a 45 year life project. The Company sees potential for further cost reductions helped by their proprietary technology, additional by-products. If they choose to take a modular approach to development then this could cut PFS initial capital costs by 50-60%.

The Company also stated:

“The attractive location is a key factor in the Project’s low capital costs. Its proximity to a major interstate highway and a transcontinental rail line, as well as the availability of low-cost power, natural gas and water, means infra-structure development costs will be low. Additionally, local communities will be an excellent source of skilled personnel as residents of the area are experienced in natural resource development and operations.”

Rare Element Resources has developed a proprietary RE recovery/processing technology. The technology has delivered a 99.999% pure, thorium-free TREO powder that has then been separated into heavy and light rare earth fractions in a single step. Optimization work continues with a focus on reducing costs and further separating the fractions into products attractive to potential end-users. This work was done with Umwelt-und Ingenieurtechnik GmbH Dresden, Germany (“UIT”), an affiliate of Synchron. Synchron, is a division of General Atomics, a leading US contractor to the defense department. Synchron owns 49% of Rare Element Resources after exercising its option to purchase company shares in October last year

Construction of the Bear Lodge Project is expected to take 12-16 months after receipt of the necessary permits (EIS on hold awaiting financing), completion of a positive Feasibility

Study, and securing project financing.

### **Closing remarks**

Rare Element Resources has a highly attractive 'US based' rare earths project, with excellent economics, including a low upfront CapEx of \$290 million. All that is needed is some funding. Given the recent new high priority towards rare earths, and particularly US rare earths deposits, one would think that Rare Elements Resources' fairly advanced stage Bear Lodge Project would stand an excellent chance of achieving funding. It is certainly in the national interest.

The current market cap of Rare Elements Resources is just US\$84 million. Analysts see plenty of upside ahead with a price target of \$2.90 which compares favorably to the current price of \$0.812/share.

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## **Surprise! Electric Vehicle global sales continue to rise in spite of pandemic...**

COVID-19 is causing huge disruptions to the global economy. Today I look at how COVID-19 (coronavirus) is impacting global electric vehicle (EV) sales and the EV metals supply chain. This includes a review of the EV metals: lithium, cobalt, graphite, nickel, neodymium and praseodymium

### **Global electric vehicle (EV) sales**

Somewhat surprisingly global electric car sales actually rose by 16% in February, compared to February 2019. The results were a mixed bag. China's electric car sales plummeted 65% YoY



and Europe sales boomed, rising a massive 111% YoY.

China usually makes up about 50% of global EV sales, and in February 2020 much of China was locked down due to coronavirus. This explains the dramatic fall in sales. Europe may follow to some degree in March EV sales, as coronavirus then moved to Europe during March, and China improved.

Also in March, we have seen a number of high profile EV manufacturers such as Tesla and Volkswagen close down some of their factories. This will impact March and April sales to some degree.

Tesla temporarily suspended production at Fremont and New York, but said superchargers, Nevada Gigafactory and their service centers would remain open. Tesla even started sourcing ventilators and donated hundreds of ventilators to California and New York City, as they began Model Y deliveries in the US.

My expectation is we will see weaker March EV sales from Europe, but stronger from China. As the coronavirus fades away (hopefully before mid 2020) we will see very strong EV sales by H2, 2020 and into 2021.

**Tesla Model Y US deliveries began in March 2020 amid the coronavirus chaos**



## **Impact on EV metals**

The key EV metals (lithium, cobalt, graphite, nickel, and NdPr) have all been slightly but not severely impacted by COVID-19.

### ***Demand***

Demand has surprisingly remained solid helped by the strong February global electric car sales. Demand temporarily shifted in February towards Europe as China slowed. I expect this to reverse somewhat in March and April. Despite generally overall solid EV metals demand so far in 2020, many of the EV metals are still working off oversupply from 2019, which has led to lower prices for lithium, cobalt, and nickel in early 2020. Nickel has also been more impacted by the global slowdown, given its key demand is for stainless steel.

### ***Supply***

Whilst most mines have remained open there have been some logistical supply issues as well as some government shutdowns. For example Argentina temporarily closed its mining sector

which temporarily impacted several lithium miners operating in Argentina. The ban has now been lifted for miners deemed as “essential”. Chile and Australia have remained open. The DRC has remained open, as has Namibia despite some cautions they may close.

With regards to logistics and processing, China’s supply chain has been only mildly impacted, as not all of China was shutdown.

## **EV subsidies**

We began 2020 with new German subsidies as well as tougher emission targets in Europe and China. This has helped 2020 EV sales. In March we had two significant new announcements:

- March 11, 2020 – The UK extended EV subsidies through to the 2022-23 financial year, with a grant of up to 35% of the vehicle’s value, capped at £3,500 (\$4,500).
- March 31, 2020 – China decided to extend the validity period of the subsidies on new energy purchases and NEV purchase tax exemption for two years.

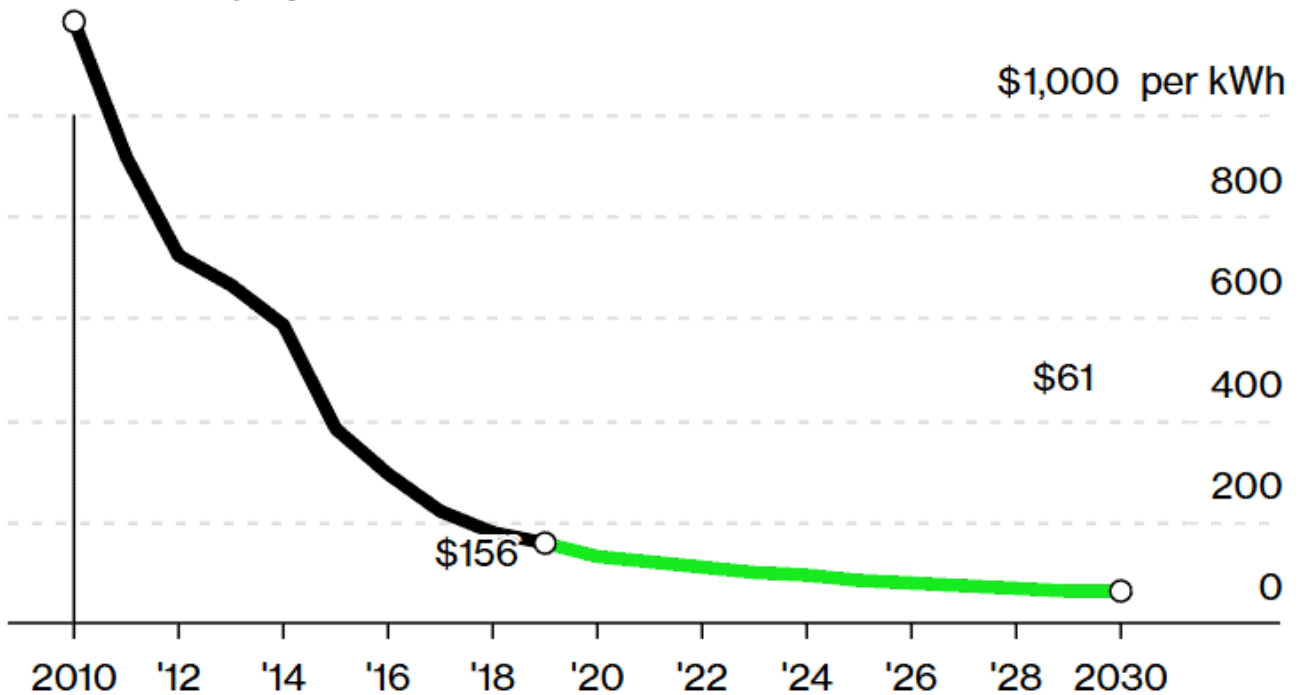
Note: The new Chinese 2 year subsidy extension news is still not widely known, and it will be a very significant boost to the Chinese EV sector.

**Lithium-ion battery prices forecast by Bloomberg to fall to USD 100/kWh by 2023 making electric cars purchase price competitive to conventional cars by 2023**

## Charging Ahead

The cost of lithium-ion batteries continue to fall each year

— real    — projected



Source: BloombergNEF

Note: 2019 USD prices

Source

### Closing remarks

Despite the world currently being in or close to a recession, the EV sector has been doing surprisingly well. At least as far as EV sales and EV metals demand and supply. In terms of pricing, the EV metals are lower and the EV metal miners have also been heavily sold off.

Given that the share market has priced most EV metal miners very low, the EV trend remains strong, and EV subsidies have been extended or increased; I expect once the fear of coronavirus passes the EV and EV metals sector will rebound very strongly.

EV/Internal Combustion Engine (ICE) purchase price parity is just around the corner (2022-23). This means it will soon be the same price or cheaper to own an EV, with all the benefits

of much lower running and service costs. Investors would be wise to take a second look at the sector before it booms again soon.

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## **Catching the world with our rare earths contingency pants down**

The rare earths market has had its ups and downs the past few years. In particular, the US-China trade war brought a new focus to the sector highlighting the world's dependency on China for rare earths supply.

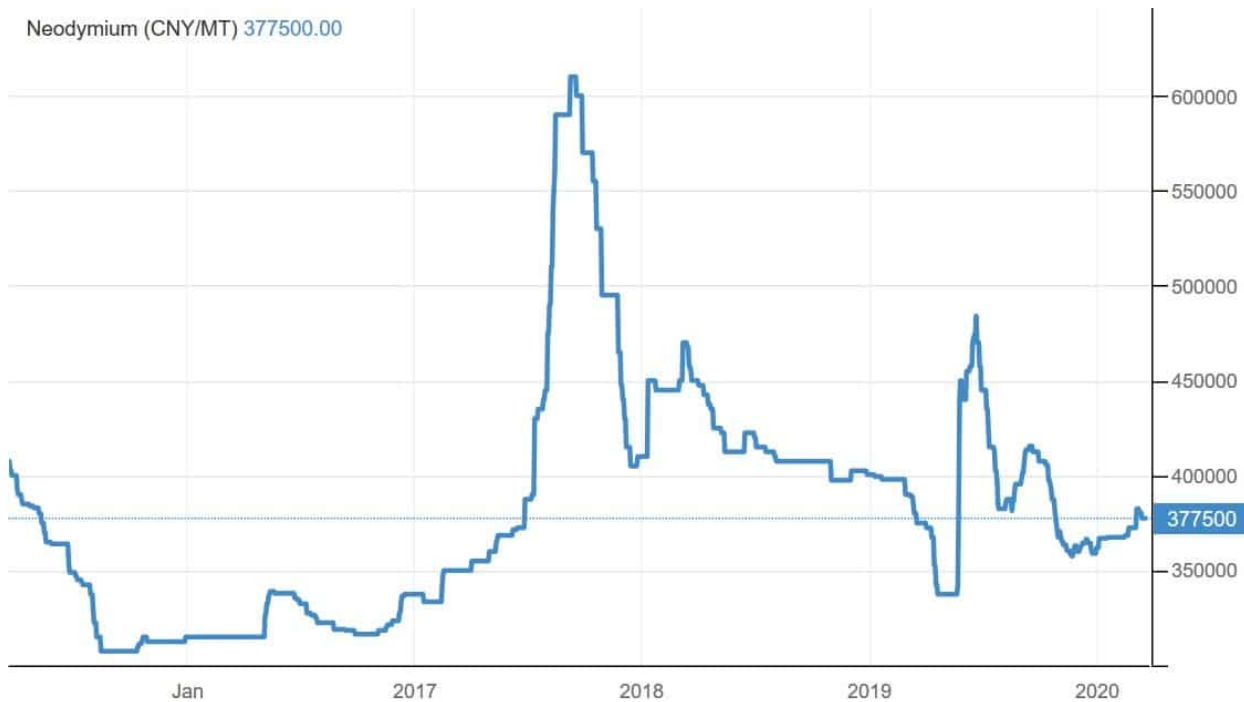
Then in early 2020 with much of China closed down by the coronavirus the Chinese rare earths supply was put to test. While the Chinese market is often quite opaque, market pricing for key rare earths such as neodymium give an indication of the supply and demand dynamics.

### **Key rare earths price movements in 2020 as the China disruption was taking place**

Neodymium (Nd) prices are up 4.28% so far in 2020, despite the slowdown in industrial production of goods that contain neodymium. Asian Metal reports praseodymium (Pr) prices are slightly down in 2020, and dysprosium (Dy) prices are up ~5% over the past 2 months.

### **Neodymium 5 year price chart**





## Source

All of this suggests that despite the coronavirus chaos in China the key rare earths market remained very stable. It would appear from this that China's inventory was adequate to cover any mining disruptions; however, demand was also lower due to the industrial slowdown.

## Experts view

In this exclusive February 18, 2020 InvestorIntel video, rare earths expert Jack Lifton discussed with Tracy Weslosky the impact the coronavirus is having on critical metals:

Jack Lifton states:

*"(China) Shipments could stop at anytime.....logistics are compromised....**The coronavirus has caught the West with its contingency pants down.....this is a warning bell for everyone in the world.**"*

Jack also revealed that we do not even know if the Chinese possess enough stockpiles of rare earths to handle their own demand, never mind the needs of Americans.

## Rare earths are vital ingredients for modern technology and the world relies largely on China



Source

### Lynas Corporation Limited

Outside of China, the rare earths supply chain is completely reliant on one company. That company is Lynas Corporation Limited (ASX: LYC). Lynas is the world's second largest supplier of rare earth materials, and the only significant rare earths producer outside of China. Most of Lynas' rare earths go to long term contracts mostly with Japan. This means if we get a rare earths supply disruption from China and higher NdPr prices, then Lynas Corporation will be the key global company to benefit. This is worth keeping in mind in case we get a second wave of the coronavirus outbreak in China.

### The latest news with Lynas Corporation

- February 3, 2020 – Australian government awards major project status to new Lynas WA plant. The Lynas Kalgoorlie plant will undertake cracking & leaching of rare earth concentrate from Lynas' Mt Weld mine, which is also located in Western Australia's Goldfields

region. Lynas will also explore opportunities for additional processing in Kalgoorlie.

- February 27, 2020 – Lynas Malaysia operating license renewed for three years.

The good news here for investors is that Lynas has achieved good progress towards their new cracking & leaching (C&L) facility planned for completion by 2023. This will tie in nicely with the 3-year Malaysian license renewal given the relocation of the C&L facility to Australia should be able to be done in the 3 year time frame. This clears the cloud over the stock from 2019 when they had uncertainties over their Malaysian license renewal due to environmental concerns. This is good for Lynas and good for security of rare earths supply ex-China.

**Lynas Corporation to diversify its rare earths operations under their 2025 plan**

# Diversifying our industrial footprint

## United States



MOU with a skilled US based partner, Blue Line Corporation, to produce separated Heavy Rare Earths and value added Specialty Materials.

## Malaysia



A dynamic operation in Gebeng with Cracking & Leaching, Solvent Extraction, Product Finishing and opportunities for further downstream processing.

## Western Australia

Tier 1 deposit at Mt Weld: Mining and Concentration. Cracking & Leaching to be relocated to WA by 2023



**A summary of Lynas' progress towards their 2025 plan**

**Making significant progress on Lynas 2025 initiatives**



Mt Weld, WA: Production ramp up to meet forecast demand growth



Kalgoorlie, WA: Building a new Cracking & Leaching in WA



Malaysia: Investing in increased downstream processing, product range, recycling



United States: Filling a market gap with new separation and product finishing capability

Source

## Closing remarks

Japan recently announced they plan to stockpile rare metals as part of an effort to reduce dependence on China. Let's hope

the US and others finally get their act together to financially support the critical materials miners. This includes not only rare earths, but also the key EV metals cobalt and lithium.

The 2020s will be a decade of enormous technological advancements with AI, IoTs, robotics, electrification of transportation, renewable energy, and energy storage. All of these need a secure supply of the 35 critical materials as identified by the U.S. Government, including rare earths.

For now, the West is lucky to have Lynas Corporation, but clearly we need many more great critical materials miners and processors to help build up our severely damaged local supply chains.

As Jack said: *"this is a warning bell for everyone in the world."* Western leaders please listen and let's not get caught with our pants down!